

2/2 018 UNCLASSIFIED PROCESSING DATE: 0000170
CIRC ACCESSION NO--AP0054279

ABSTRACT/EXTRACT--(U) GP-CH ABSTRACT. THE IRREVERSIBLE THERMAL DENATURATION KINETICS OF CHYMOTRYPSIN HAVE BEEN STUDIED BY FOLLOWING, ON THE ONE HAND, THROUGH INTENSITY CHANGES ON THE OPTICAL ROTATORY DISPERSION CURVE AT 233 Mμ CHARACTERIZING THE CONFORMATIONAL STATE OF THE MOLECULE AND, ON THE OTHER HAND, CHANGES IN CONCENTRATION OF CHYMOTRYPSIN-PROFLAVINE COMPLEX CHARACTERIZING THE STATE OF THE ADSORPTION SITE OF THE ENZYME. BOTH METHODS ALLOW TO OBTAIN VALUES OF EFFICIENT RATE CONSTANTS OF DENATURATION AND THERMODYNAMIC ACTIVATION PARAMETERS FROM WHICH THE CONCLUSION WAS DRAWN THAT UNDER THE EXPERIMENTAL CONDITIONS THE CONFORMATIONAL STABILITIES OF THE MOLECULE AS A WHOLE AND OF ITS ADSORPTION SITE ARE EQUAL. COMPARISON OF THE THERMODYNAMICS DATA OBTAINED IN THE PRESENT WORK WITH THOSE IN THE LITERATURE HAS SHOWN THAT THE ACTIVATION PARAMETERS ARE HIGHLY DEPENDENT UPON THE PH OF THE MEDIUM AND ELECTROSTATIC INTERACTIONS ARE A VERY IMPORTANT FACTOR IN DETERMINING THE STABILITY OF THE NATIVE CHYMOTRYPSIN STRUCTURE.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ISOSTERIC ANALOGS OF ALPHA CHYMOTRYPSIN SUBSTRATES -U-

AUTHOR-(02)-ANTONOV, V.K., VANYUKOVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--BIOKIMIYA 1970, 35(1), 202-3

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TRYPSIN, ENZYME ACTIVITY, ORGANIC SULFUR COMPOUND, BENZENE
DERIVATIVE, AMINE DERIVATIVE, HYDROLYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1984/0971

STEP NO--UR/0218/70/035/001/0202/0203

CIRC ACCESSION NO--AP0055571

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--13SEP70

CIRC ACCESSION NO--AP0055571

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ALPHA CHYMOTRYPSIN EXHIBITED
SIMILAR SPECIFICITY, IN TERMS OF KSUBO-KSUBM AGAINST PRXCH(COSUB2ME)DBZ
(I, X EQUALS CHSUB2, S, AND NH) BUT WAS MUCH LESS EFFECTIVE IN
CATALYZING THE HYDROLYSIS OF I (X EQUALS NME). INTRODUCTION OF THE BEN
SUBSTITUENT SHARPLY DECREASED KSUBO BUT HAD LITTLE EFFECT ON THE
APPARENT KSUBM.

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AA0039827 Antonov V.M.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent,

3/10

237914 METALLISED SINTER PRODUCTION uses heated air for sintering and heated reducing gas, at controlled waste gas pressure. To upgrade the end product and prevent secondary oxidation, the reducing gas temperature (heated to 1200°C) is reduced to 100°C at a rate of 30-50 degrees/min. The gas is heated in regenerative checkers themselves heated by the sintering air re-circulating. After the charge has been placed on the throat grid, it is fired and sintered, keeping gas pressure above 1.0 atm. abs. The fine, low-sulphur

19741187

AA0039827

end product occurs as a cake whose upper part is at 1000-1300°C. The reducing gas is passed through the bed, also under controlled pressure. Termination of this reducing blow operation is signified by the cessation of ferrous oxide reduction as the sinter cake cools back to 300-400°C, and thus prevents secondary oxidation. 1.4.67. as 1145585/22-2. MIKHALEVICH, A.G. et al. I.P. Bardin Ferrous Metallurgy Res. Inst. (11.7.69.) Bul.9/20.2.69. Class 18a. Int.Cl. C21b.

LD

AUTHORS: Mikhalevich, A. G.; Voskobovnikov, V. G.; Buvarov, A. A.
Bunakov, O. D.; Zhurakovskiy, B. L.; Migutskiy, L. R.;
Antonov, V. M.; Sholeninov, V. M.; and Tkachev, V. V.

Tsentral'nyy Nauchno - Issledovatel'skiy Institut
Chernoy Metallurgii imeni I. P. Bardina

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2

19741188

USSR

UDC 681.327.2

TSVETAYE, V. K.P., ANTONOV, V. N., KONDRAT'YEV, P. P., SHISHKIN, A. M., and
FUFLYGIN, G. I., Moscow Power Institute

"Recording Device"

USSR Author's Certificate No 372557, kl G 06 f 3/14, filed 4 Jul 69,
published 25 Apr 73 (from RZh Avtomatika Telemekhanika i Vychislitel'naya
Tekhnika, No 11, Nov 73, abstract No 11, A431P)

Translation: A device is proposed for recording, containing the following units arranged sequentially along one optical axis: a light source, system of controlling the light beam containing sequentially arranged polarizers, crystal blocks with controllable planes of polarization and an analyzer, an optical system, and an information carrier. To improve the speed, the crystals of the light beam control system contain openings corresponding to the shapes of the symbols to be recorded. Two illustrations.

1/1

1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CATALYTIC DEHYDROCHLORINATION OF CHLOROETHANES. I. CATALYTIC
DEHYDROCHLORINATION OF 1,2-DICHLOROETHANE -U-
AUTHOR-(03)-GOLEVA, A.A., ANTONOV, V.N., FLID, R.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 249-52
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHLORINATION, CHLOROETHANE, CATALYST ACTIVITY, ACTIVATED
CARBON/(U)AG2 ACTIVATED CARBON, (U)AG3 ACTIVATED CARBON, (U)AG5
ACTIVATED CARBON, (U)AR3 ACTIVATED CARBON, (U)BAU ACTIVATED CARBON,
(U)SKT ACTIVATED CARBON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1404 STEP NO--UR/0076/70/044/001/0249/0252
CIRC ACCESSION NO--AP0116851
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116851

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CATALYTIC ACTIVITY OF ACTIVATED C OF AG-2, AG-3, AG-5, AR-3, BAR, SKT TYPES WAS INVESTIGATED. THE MOST ACTIVE WAS THE AG-2 TYPE (SIMILIAR TO 58PERCENT CONVERSION OF C SUB2 H SUB4 CL SUB2 AT 320DEGREES). THE KINETICS OF DEHYDROCHLORINATION OF 1,2,DICHLOROETHANE ON THE GIVEN CARBONS TREATED WITH HCL SOLN. WAS STUDIED, AND WAS A 1ST ORDER REACTION WITH RESPECT TO C SUB2 H SUB4 CL SUB2. THE KINETIC PARAMETERS OF THE REACTION WERE DETD. THE ACTIVATION ENERGY FOR CARBONS AG-2, AG-5, AG-3, AR-3, BAU WAS 21000, 19000, 18000, 17000 AND 8000 KCAL-MOLE, RESP., AND THE COEFF. WAS 2.09 TIMES 10 PRIME9, 3.16 TIMES 10 PRIME9, 4.17 TIMES 10 PRIME8, 4.08 TIMES 10 PRIME8, 1.41 TIMES 10 PRIME5. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IN, LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 019

UNCLASSIFIED

PROCESSING DATE--1600170

TITLE--KINETIC DETERMINATION OF COPPER -U-

AUTHOR--(05)-KREINGOLD, S.U., BOZHEVOLNOV, YE.A., ANTONOV, V.N.,
PANTELEIMONOVA, A.A., SOSENKOVA, L.I.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260,952

REFERENCE--UTKRY, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970 47(4) 95

DATE PUBLISHED--06JAN70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--COPPER, CHEMICAL PATENT, OXIDATION, HYDROGEN PEROXIDE,
FLUORIDE, CHEMICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1994/1994

STEP NO--UR/0482/70/000/000/0000/000

CIRC ACCESSION NO--AA0115793

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--1600170

CIRC ACCESSION NO--AA0115793

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. COPPER WAS DETD. KINETICALLY BY
THE OXIDN. OF AMIDOL BY H SUB2 O SUB2 IN A FLUORIDE BUFFER SOLN. AT PH
2.5-4.5.

1986 12 15 10 11

USSR

UDC: 621.396.69:621.318.4(088.8)

PANOV, Yu. A., ANTONOV, V. P., GOROZHANIN, Yu. A.

"An Inductance Coil"

USSR Author's Certificate No 266869, filed 24 Sep 68, published 15 Jul 70
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1V324 P)

Translation: The proposed inductance coil is made in the form of two helical windings which are mutually coaxial and contains a regulating element. In order to regulate the inductance of the coil, this element is made in the form of a cylindrical shield placed between the windings of the coil.

1/1

USSR

UDC 616.2-036.11-032.14

IL'YENKO, V. I., PLATONOV, V. G., GORDON, M. A., ANTONOV, V. S., PELYAYEVA, N. M.
and ANTIPOVA, E. R., All-Union Scientific Research Institute of Influenza,
Ministry of Public Health USSR, Leningrad

"Frequency of Development of Associated Infections Accompanying Acute Respiratory Diseases"

Moscow, Voprosy Virusologii, No 1, 1973, pp 82-86

Abstract: Incidence and characteristics of multiple infections were studied among 4,256 patients with clinically diagnosed influenza or acute respiratory disease. Out of 40% of these, for which the etiology had been established, 12.6% had associated infections, the percentage being somewhat higher for hospitalized than for ambulatory patients, but no seasonal variation was found. Analysis of the incidence of associated infections with respect to disease caused by particular pathogens indicated that most (41.7%) associated infections occurred among patients with para-influenza type 2 and least (1%) with influenza type B. Most associated infections (88%) were caused by influenza virus, particularly during epidemics. When influenza virus was not involved, Mycoplasma pneumoniae was encountered most frequently (55.7%). Such multiple infections were normally found to produce more severe symptoms.

1/1

Welding

2

USSR UDC 621.791.042:669.15'74-194
RYAZANTSEV, V. I., FUGACHEV, A. I., Candidates of Technical Sciences,
SMIRNOVA, Ye. I., MIKHAYEV, I. M., Engineers, ANTONOV, Ye. G., Candidate of
Technical Sciences, and OSOKINA, T. N., Engineer

"Selection of an Additive Material for Welding of Mg-Zn-Zr-REM Alloys"

Moscow, Svarochnoye Proizvodstvo, No 7, Jul 1972, pp 9-11

Abstract: Deformable magnesium alloys in the system Mg-Zn-Zr-REM are recommended for the manufacture of complex structures without stress relief following welding. These alloys have tensile strengths of at least 22 kg/mm^2 and $\delta \geq 15\%$. These alloys are also superior in impact toughness, relative elongation, and relative reduction in area. The weldability of the alloys studied was evaluated using sheets 2 mm thick following annealing for one hour at 260°C . The alloys were found to have good weldability with argon arc welding using wires with compositions differing from the base metal. Two compositions of wires based on Mg are suggested: 1.0-1.5% Zn, 0.5-0.7% Zr, 2.8-3.7% Ce; and 1.0-1.5% Zn, 4.4-7.0% Al, 0.3-0.6% Mn. The former wire is recommended for complex and rigid structures with large volumes of manual welding; the latter is recommended for automatic welding of structures to be subjected to impact and cyclical loading. These wires produce welded joints with strengths at least 90% of the base metal, bending angle at least $1/2$

USSR

RYAZANSEV, V. I., et al., Svarochnoye Proizvodstvo, No 7, Jul 1972, pp 9-11

50 and 65° respectively. Overall corrosion of welded seams using these wires is similar to the base metal; the welded joints are not inclined to corrosion under stress.

2/2

- 69 -

Welding

2

USSR

UDC 621.791.042:669.15'74-124

RYAZANTSEV, V. I., PUGACHEV, A. I., Candidates of Technical Sciences,
SMIRNOVA, Ye. I., MINHEYEV, I. M., Engineers, ANTONOV, Ye. G., Candidate of
Technical Sciences, and USOKINA, T. N., Engineer

"Selection of an Additive Material for Welding of Mg-Zn-Zr-REM Alloys"

Moscow, Svarodchnoye Proizvodstvo, No 7, Jul 1972, pp 9-11

Abstract: Deformable magnesium alloys in the system Mg-Zn-Zr-REM are recommended for the manufacture of complex structures without stress relief following welding. These alloys have tensile strengths of at least

22 kg/mm² and $\delta \geq 15\%$. These alloys are also superior in impact toughness, relative elongation and relative reduction in area. The weldability of the alloys studied was evaluated using sheets 2 mm thick following annealing for one hour at 260°C. The alloys were found to have good weldability with argon arc welding using wires with compositions differing from the base metal. Two compositions of wires based on Mg are suggested: 1.0-1.5% Zn, 0.5-0.7% Zr, 2.8-3.7% Ce, and 1.0-1.5% Zn, 4.4-7.0% Al, 0.5-0.6% Mn. The former wire is recommended for complex and rigid structures with large volumes of manual welding; the latter is recommended for automatic welding of structures to be subjected to impact and cyclical loading. These wires produce welded joints with strengths at least 90% of the base metal, bending angle at least 1/2

USSR

RYAZANTSEV, V. I., et al., Svarochnoye Proizvodstvo, No 7, Jul 1972, pp 9-11

50 and 65° respectively. Overall corrosion of welded seams using the wires is similar to the base metal; the welded joints are not inclined to corrosion under stress.

2/2

- 50 -

USSR

UDC: 621.791.053:669-153:539.719

PREIDLINA, YE. YU., POPOV, A. S. and ~~ANTONOV, YE. G.~~ (Engineers)

"Effect of Annealing on the Residual Stresses and Mechanical Properties of Welded Joints of MA2-1 and VMD-3 Magnesium Alloys"

Moscow, Svarochnoye proizvodstvo, No 12, Dec 71, pp 33-34

Abstract: The fabrication of welded structures from magnesium alloys involves relieving of residual welding stresses inasmuch as formable alloys of the Mg-Al system tend to stress corrosion. To reduce the tendency to cracking, such structures are subject to annealing. This study concerns the effect of both temperature and annealing time on the values of residual stresses and mechanical properties of welds of MA2-1 and VMD-3 alloys. Use was made of reference holes to measure the residual stresses prior to and after annealing. The annealing temperatures and durations were 250 and 350°C for 0.5 to 20 hrs. The stress measurement results indicate that annealing at 250°C for 0.5 to 1 hr reduces residual stresses to about one half and for more than 2 hrs -- to about one tenth. Annealing at 350°C for 1 hr

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USSR

PREYDLINA, YE. YU., et al, Svarochnoye proizvodstvo, No 12, Dec 71, pp 33-34

makes possible almost complete relaxation of stresses. The mechanical properties of the tested alloys both before and after annealing are cited, indicating that annealing MA2-1 alloy at 350°C up to 20 hrs leaves its properties unaffected except for the angle of bend and notch toughness. Annealing VMD-3 alloy at 250°C for 6 hrs failed to affect its mechanical properties; annealing at 350°C, for longer durations, the properties of the parent material begin to deteriorate and its plasticity increases; the strength properties of the welds are somewhat improved. (3 illustrations, 1 table).

2/2

- 74 -

USSR

UDC 621.791.019

ANTONOV, Ye. G., POPOV, A. S., YAKUSHIN, B. F., OSOKINA, T. N., MIKHEYEV, I. M., SMIRNOVA, Ye. I., SHPAGIN, B. V., and NIKOLAYEVA, V. S., Moscow

"Metallurgical Action on Seam Strength in Magnesium Alloy Welding"

Kiev, Avtomaticheskaya Svarka, No 2, Feb 71, pp 53-55

Abstract: The problem considered in this paper is the metallurgical means that can be used to deal with cracks in magnesium alloy welds, specifically magnesium alloyed with zinc, and the efficiency of the means. Melts of the VMD3 series and several magnesium-zinc melts were the subjects of the experimentation; the defect of the first class of alloys is the tendency of its welds to develop heat cracks caused by the change in the lanthanum content. It was assumed in these tests that the introduction of rare earth metals into the alloys would improve their resistance to the formation of cracks since magnesium forms eutectics with these metals. A conclusion reached by the authors is that one cause of cracks forming in the welds that did not contain zirconium is the large crystalline structure of the weld metal, and that the resistance of the weld to cracks could be improved by the addition of 0.55% Zr.

1/1

Welding

USSR

UDC 621.791.011.001.5:669.721 + 669.5

ANTONOV, YE. G., Engineer, POPOV, A. S., Engineer, YAKUSHIN, B. F., Candidate of Technical Sciences, OSOKINA, T. N., Engineer, NIKOLAYEVA, V. S., Technician, MIKHEYEV, I. M., Engineer, SMIRNOVA, YE. I., Engineer, SHPAGIN, B. V., Engineer, and BABADZHANGVA, I. S., Engineer

"Effect of Rare-earth Elements on the Weldability of Magnesium-Zinc and Magnesium-Zinc-Zirconium Alloys"

Moscow, Svarochnoye Proizvodstvo, No 12, Dec 70, pp 6-8

Abstract: The effect of some rare-earth metals on the weldability of magnesium-zinc and magnesium-zinc-zirconium alloys was studied in experimental melts. Sheets of the alloys, 2 mm thick, were obtained by rolling on a "Duo" laboratory mill from flat ingots cast in metal molds. Before rolling, the ingots were heated to 380-400° C (11 intermediate heats, 2-3 passes). Shrinkage was 15-25 percent. After rolling, the sheets were annealed at 260° C for an hour. The filler wire was made of the same material. The results indicate that rare-earth metals (neodymium, 1/2

USSR

ANTONOV, YE. G., et al., Svarochnoye Proizvodstvo, No 12, Dec 70, pp 6-8

lanthanum, mischmetal) at the rate of up to 0.6 percent by weight affect the hot-shortness of the studied alloys in different ways during welding. The most probable reason for this is the varying effect of rare-earth metals on the plasticity of the studied alloys in the region of the lower limit of the brittle temperature range, as well as the varying effect on the magnitude of the latter. The weld cracking resistance of the alloys can be increased by alloy additions of lanthanum and cerium mischmetal and the use of filler wire (2 percent Zn, 0.45 percent Cr, 3.44 percent cerium mischmetal, the rest Mg).

2/2

USSR

UDC 621.791.75.001.5:548.73/.75

BOLDYREV, A. M., Candidate of Technical Sciences, DOROFYEV, E. B., Engineer,
and ANTONOV, Ye. G., Engineer

"Control of Crystallization of Metal during Fusion Welding"

Moscow, Svarochnoye Proizvodstvo, No 6, 1971, pp 35-37

Abstract: The most universal method of producing a finer metal seam structure is that of regulating the degree of concentration supercooling by applying oscillations to the welding bath. This article reports on a study involving melting of plates measuring 100 by 200 mm with an electric DC arc, in which an external magnetic field was applied to the welding bath, created using a magnetizing coil installed on the air-cooled nozzle of a welding torch. It is concluded that this contactless method of generating oscillations in the conducting liquid metal is the most promising technological method of introducing oscillations to the welding bath. A finer metal seam structure was observed during induction of both constant and variable magnetic fields. The optimal pulsating magnetic field frequency was found to be 5-16 Hz.

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THE FOLLOWING PERSONS ARE IDENTIFIED IN THE JANUARY 1979, TELETYPE MESSAGE
FOR ISLAMABAD, PAKISTAN.

~FEDOSOV, VLADIMIR STEPANOVICH

~KALUGIN, VALERIY A.

~ANTONOV, YE. I.

~TARSKIY, YURTY GENTHOVICH

~ZILENKOV, BORIS PETROVICH

~GRIBKOV, A. N.

COUNSELLOR: SEP 71

SECOND SECRETARY (REMOVED FROM
FIELD OFFICE: APR 71, FEB 72)

SECOND SECRETARY: MAY 71

PRESS ATTACHE (REMOVED FROM
AT THE CONSOLE IN KARACHI)
31 MAR 71

ATTACHE: JUL 71

ATTACHE: A. K. K. IN NOV 71

UNCLASSIFIED

USSR

UDC: 621.374.3.008.8

DEMOCHENKO, A. M., SERIKAL, A. M., ARLOV, Ye. V., RAULIN, E. S.,
ROGOV, B. V., and RAUMOV, A. M.

"Test Signal Formation Device for Tuning Electronic Equipment"

Avt. sv. USSR (Author's Certificate USSR) Class 21a⁴, 2/01, (H 03
b 22/00), No. 270825, Application 27.01.69, Publication 1.09.70
(from R&D-Radiotekhnika, No. 3, March 72, Abstract No. 34800F)

Translation: A device is proposed for forming a test signal for
tuning electronic equipment, containing a frequency modulator,
a modulator, fixed at two frequency oscillators, an automatic
gain control circuit, a marker generator, and a control device.
The device is distinguished in that, for the purpose of simpli-
fying the equipment for formation of powerful undistorted signals
consisting of pulses of FM oscillations at low resistance loads,
the fixed frequency oscillators mentioned above are connected
through a summing circuit to the frequency modulator.

1/1

USSR

UDC: [621.3.013+537.312.62].001.1

KAZOVSKIY, Ye. Ya., ~~ANTONOV, Yu. F.~~, Leningrad

"Theory of a Superconducting Magnetic Flux Pump With a Plate"

Moscow, Izv. AN SSSR: Energetika i Transport, No 4, Jul/Aug 72, pp 66-76

Abstract: The authors investigate the electromagnetic processes in a magnetic flux pump with plate which are caused by variations in the coefficients of induction of the superconducting sections of the plate and of the system as a whole as displacement of the normal zone in the plate takes place, assuming that the magnetic flux penetrating the normal zone is constant. The physical essence of the process of current increase in the load is explained. Formulas are derived for the increments of magnetic fluxes, currents and stored electromagnetic energy in the system for "pump" and "exhaust" cycles, and the limiting current of the load is determined as a function of the magnetic flux of the electromagnet. The proposed theory can be adapted to cylinder and disc modifications of the magnetic flux pump.

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U.S.S.R.

UDC: 621.313.377.312.42.001.5

MAKOVICH, Ye. M., Professor, Doctor of Technical Sciences, and
Candidate of Technical Sciences, M.V. Lomonosov

"Operation on Characteristics of Superconducting Machines"

Abstract, Electrical Engineering, No. 12, 1986, p. 1271.

Abstract: This is a fairly simple article. It is devoted to the operation on characteristics of superconducting machines. The author discusses the effect of the movement of quantized flux lines in superconductors of the second kind and thin films on the characteristics of the first kind. Two types of machines are considered, the first using the effect of longitudinal movement of the lines of flux, the case of mutually perpendicular magnetic and electric fields, and the second using the effect of transverse movement of the quantized flux lines, the case of parallel fields. The discussion is limited to a general analysis of motors and generators, and the characteristic curves

1/2

- 55 -

USSR

KAZOVSHI, YE. YA., et al, Elektrotehnika, No 2, Feb 71, pp 3-6

of each are given. The authors note that the analytical and experimental work now available substantiates the relationships derived in this article, and suggest that further development of electroconductive machine theory, with computations of the electromagnetic field distribution depending on the machine geometry, is needed.

2/2

Acc. No.:

AP0096499

USSR

ANTONOV, YU. V., REYKHIN, A. V., & TARASOV, V. E.

"Characteristics of a Vapor Bubble Cooling of a Hot Surface"

Moscow, Khimicheskaya Fizika i Mekhanika (Chemical Engineering), 1978, No. 1, pp. 1-4.

Translation: A description is given of an experimental study of the heat transfer characteristics of a vapor bubble cooling of a hot surface. The results of the experiments are used for calculating the minimum temperature drop and specific refrigeration capacity of tubes and the dependence of the minimum temperature drop on the specific refrigeration capacity in operation with and without cooling of the surface fraction. It was established that the refrigeration capacity of tubes is slightly dependent on the length of their hot end. (1 table, 7 references, 4 illustrations)

Reel/Frame

19781752

USSR

UDC 621.372.061

ANTONOV-ANTIPOV, YU. N.

"Noiseproof Feature of the Automatic Frequency Control of Pulsed Signals With Linear Frequency Modulation"

Moscow, Dokl. nauchnotekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970 g. Sekts. Radiotekhnicheskaya. Podseks. Statistich. radiotekhniki (Reports of the Scientific-Technical Conference on the Results of Scientific Research Work for 1968-1969. Moscow Power Engineering Institute, 1970, Radio Engineering Section. Statistical Radio Engineering Subsection), 1969, pp 82-90 (from RZh-Radiotekhnika, No 4, 1970, Abstract No 4A120)

Translation: Dispersion D_w of intrapulse frequency (in a pulsed system with frequency modulation) is conditioned by input noise and heterodyne eigenfrequency fluctuation due to nonuniformity in the modulation rate. D_w is determined by determining the voltage averaged with respect to its period at the multiplier output in $1/2$

- 13 -

USSR

ANTONOV-ANTIPOV, YU. N., Dokl. nauchnotekhn. konferentsii po
itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t,
1970 g. Sekts. Radiotekhnicheskaya. Podseks. Statistich.
radiotekhniki, 1969, pp 82-90

the automatic frequency control system. The obtained data are presented as a function of the signal/noise ratio and are compared with the results obtained in the experimental study of an automatic frequency trim system. In comparing the data, it is obvious that satisfactory concurrence is achieved between the theoretical and experimental curves at a signal/noise ratio >3 . Characteristics of the multiplier-filter system are also studied. Original article: 3 illustrations and 1 bibliographic entry. L.S.

2/2

USSR

ANTONOV-ROZDOLNITSKY, V. V.

"Computing the Attenuation of Recombination Glow"

Leningrad, Fizika Tverdogo Tela, vol. 13, No. 10, October 1971,
pp 3143-3144

Abstract: This article is, in effect, a correction of an earlier article by the same author, published in the journal named above (12, 1970, p 3366). The earlier article offered an approximate computation for the attenuation of the glow from the initial distribution of the recombining partners, the attracting ionized glow centers, and the free carriers. In the present article, the computation is made more precise. The author is enabled to get this additional precision in the result because, in the calculations of the present article, he takes into account what he neglected in the earlier one: i.e., the diffusion displacements of the "red" carriers, in addition to the carrier drift. He is associated with the L. V. Lebedev Physics Institute, Moscow.

1/1

ANTONOVA, A.M.

Hand 18.960/15.001.77
1000-713

Balabov, V. P., and V. V. Bulanov. Numerical solution to a problem on shock wave interaction with a cylinder in supersonic flow. Izv. Vuzov, no. 6, 1971, 1033-1037. (RZhMekh, 5/72, no. 51327)

A difference scheme of a second order of exactness is proposed for the calculation of the axisymmetric unsteady flow of an ideal gas. A numerical solution is obtained to the problem of a shock wave impacting a cylinder in supersonic flow. In the first stage of solution, the problem of streamline flow is solved by the method of adjustment. In the second stage the problem of shock interaction is solved. Pulsed pressure values were calculated for regimes with Mach numbers within the range of 1.5 to 5.

Antonova, A. M. High speed gas flow around a slender three-dimensional body. Trudy II Respublikanskoy konferentsii po aerodinamicheskimi i teploobmennymi i massobmennymi. Sektsiya "Aerodinamika i teploobmen". Kiyev, Kiyevskiy universitet, 1971, 99-102. (RZhMekh, 5/72, no. 51340)

A formulation of the problem of flow around a slender body by a hypersonic gas is described. Within hypersonic theory of small perturbations, the problem can be reduced to the solution of a quasi-linear second-order equation in terms of partial derivatives of the hyperbolic type for a flow function in a plane of similarity variables. An iteration method of solving a Cauchy problem for this equation is proposed which reduces to an inverse problem for the flow around a slender pointed body with an attached shock wave.

USSR

UDC 621.311.029.4:621.317.71.039.6

ANTONOVA, D. I.

"Standard Current Measures Based on an Ionization Chamber"

Tr. metrol. in-tov SSSR (Works of the USSR Metrology Institutes), 1971, No 115 (175), pp 5-9 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 10, Oct 71, Abstract No 10.32.1411)

Translation: Standard small current measures used to check instruments which measure small direct currents are described. The standard measures are based on using the ^{239}Pu isotope. The results of observing the stability of the current measures with a rated values of 10^{-10} amps and an error of 0.5% are presented. There are 7 illustrations and a 5-entry bibliography.

1/1

USSR

UDC 616.988.75-036.2(47+497.2)

ZAKSTEL'SKAYA, L. YA., NIKOLOVA, Z., ANTONOVA, I. V., KEBEDZHIYEV, G., YEVSTIGNEYEVA, N. A., and SHENDEROVICH, S. F., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow, and Scientific Research Institute of Epidemiology and Microbiology, Sofia

"A Comparative Study of the 1969 Influenza Epidemic in the Soviet Union and in the People's Republic of Bulgaria"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 71, pp 656-661

Abstract: The influenza epidemics which lasted from December 1968 to April 1969 in the USSR, afflicting 12.4% of the population, and from February to April 1969 in Bulgaria, afflicting 5.9% of the population, had several common characteristics: both were of foreign origin (brought in by travellers), both developed more gradually but lasted longer than previous epidemics, and the severity of the diseases was mild to moderate, so that no special disruptions occurred either in business or in schools. Over 2,000 strains of virus A2 were isolated in the USSR, of which 439 were investigated, while 226 strains of the same virus were isolated and investigated in Bulgaria. All these strains formed a homogeneous antigenic group, with variant A2 (Hong Kong)68 predominating. Virological, serological, and immunofluorescent tests revealed that this variant differed considerably from the 1/2

ZAKSTEL'SKAYA, L. YA., et al., Voprosy Virusologii, No 6, Nov/Dec 71, pp 656-661

parent strain A2(Singapore)57 and from the subtype A2 which proliferated in 1964-1967 but was practically identical with the subtype A2/3.

2/2

- 6 -

USSR

ALEBASTROVA, A. N., ANTONOVA, L. A., ZIMIN, V. A., LITSYN, N. M.

"One Algorithm for Preliminary Processing of Electrocardiograms"

Med. Kibernetika [Medical Cybernetics -- Collection of Works], Kiev, 1972, pp 66-74 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V704, by V. Mikheyev).

Translation: One possible approach to the problem of preliminary processing of electrocardiograms (EKG) is studied, based on element-by-element analysis of the waves and intervals between them. The analysis program includes a curve-smoothing algorithm, determination of levels of isolines (reading lines), investigation of periodicity, recognition of waves and comparison of data produced with the norms. To determine the level of the isolines, the ordinates of the EKG points are looked upon as values of a certain random quantity and the statistical distribution series is constructed for it. The ordinate with the greatest frequency defines the level of the x_0 isoline.

The positive and negative waves are read from this isoline. In order to input the EKG into a computer, the initial information, produced as an analog voltage, is converted to a digital series. For various reasons (influence of

USSR

Alebastrova, A. N., Antonova, L. A., Zimin, V. A., Litsyn, N. M., Med. Kibernetika, Kiev, 1972, pp 66-74.

bioelectric currents, apparatus noise), the quality of recording of the EKG may be poor which, in turn, may cause incorrect recognition of elements of the cardiogram and, therefore, improper diagnosis. It is therefore quite important to eliminate "noise," i.e., to produce an EKG in pure form. Smoothing of the curve is performed in several passes. First-power errors are eliminated first. If point (x_i, t_i) is erroneous, the new value of ordinate x_i is assumed equal to the value of the ordinate in the preceding point $\bar{x}_i = x_{i-1}$. In the next stage, second power errors are eliminated, and it is assumed that $\bar{x}_{i+1} = \bar{x}_i = x_{i+1}$. After each stage, visual observation was performed, indicating that it is sufficient to perform three or four stages of smoothing to produce a satisfactory curve. One peculiarity of the EKG curve is its periodicity. An EKG curve can be analyzed for pathology by simply checking its periodicity, without determining the characteristics of the arrhythmia. The algorithm for determination of the EKG period uses the autocorrelation function $K_x(T)$ to calculate the degree of similarity between two neighboring sectors of the EKG. 1 table, 3 figures, 6 biblic. refs.

2/2

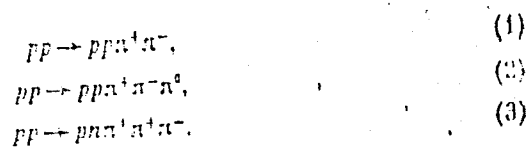
USSR

TAKIBAYEV, ZH. S., BOOS, E. G., SAN'KO, L. A., TEMIRALIYEV, T.,
ANTONOVA, M. G., YERMILOVA, D. I., MUKHOMODOVA, T. I., KHOLMET-
SKAYA, A. V., and FEDOSEYENKO, V. V., Institute of Nuclear Phys-
ics, Academy of Sciences Kazakh SSR

"Study of Dynamics of Resonance Production in Four-Track Proton-
Proton Interactions at Momentum of 10 GeV/c"

Moscow, Yadernaya Fizika, Vol 13, No 1, 1971, pp 113-123

Abstract: The article gives an analysis of 1800 four-track
proton-proton interactions recorded in an 81-cm Saclay hydrogen
bubble chamber irradiated with protons with a momentum of 10.0 GeV/c
on the CERN synchrotron. The following reactions are
considered:



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- 62 -

USSR

TAKIBAYEV, ZH. S., et al., Yadernaya Fizika, Vol 13, No 1, 1971, pp 113-123

Nucleon and meson resonance production cross-sections are determined and the contribution of two-particle reactions studied. It is shown that pion production in all the channels considered is accompanied in most cases by nucleon resonance production. The contribution of boson resonances, which is greatest in the channel with π^0 meson production, does not exceed 10 percent of the reaction channel cross-section. The use of the maximum momentum method permits estimates of the cross-sections for different quasi-two-particle reactions. The cross-sections of the dynamic states being observed differ considerably in channels (2) and (3), where the number of pions and nucleons coincides. This may be due to changes in the nucleon charge in inelastic pp interactions.

2/2

USSR

UDC 669.295.002.68

RUBTSOV, A. N., OLESOV, Yu. G., CHERKASHIN, V. I., ANTONOVA, M. M., and
LISKOVICH, V. A.

"New Methods of Reprocessing Titanium Material Wastes"

Moscow, Tsvetnyye Metally, No 5, May 70, pp 60-62

Abstract: Two new laboratory methods of reprocessing wastes from titanium production are described and evaluated. The first method involves electrolytic refining of dehydrated titanium alloys, and the second, hydrometallurgical separation of hydrated components of titanium alloys. Titanium alloy powders of a given chemical composition were produced by hydrogenation. The expediency of producing hard refractory compounds (carbides, nitrides, borides, etc.) from titanium and its alloys wastes is stressed. The new methods are undergoing further testing.

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- 60 -

1/2 031 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--THE TERNARY SYSTEMS METAL CARBON HYDROGEN AND METAL NITROGEN
HYDROGEN -U-
AUTHOR--(03)-SAMSJNOV, G.V., ANTONOVA, M.M., POROZOV, V.V.
COUNTRY OF INFO--USSR
SOURCE--POKUSHKOVAYA MET., APR. 1970, (4), 66-79
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--PHASE EQUILIBRIUM, HYDRIDE, CHEMICAL BONDING, ELECTRON
STRUCTURE, X RAY DIFFRACTION ANALYSIS, NEUTRON DIFFRACTION, NITROGEN,
CARBIDE PHASE, METAL CONTAINING GAS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REL/PERM--3006/0536 STEP NO--08/0226/70/000/004/0056/0079
CIRC ACQUISITION--001/001/001
UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP013498

ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. THE NATURE OF THE TERNARY HYDRIDES FORMED IN THE ME, C, H AND ME, N, H SYSTEMS WAS STUDIED BY X RAY AND NEUTRON DIFFRACTION FOR CASES IN WHICH ME IS EQUAL TO TI, ZR, HF, V, NB, LA, OR YI. PRIOR TO THE INTRODUCTION OF H THE CARBIDES IN THE ME, C, H SYSTEMS WERE IN A DISORDERED STATE; ON INCREASING THE H CONTENT ORDERING SET IN RAPIDLY. THESE RESULTS AND CORRESPONDING RESULTS OBTAINED FOR THE ME, N, H SYSTEMS ARE INTERPRETED ON THE BASIS OF THE STABLE ELECTRON CONFIGURATIONS CHARACTERIZING THE CHEMICAL BONDS IN THE ASSOCIATED NITRO AND CARBYDRIDES.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CHEMISTRY OF UNSATURATED ETHERS. XXX. DIENE CONDENSATION OF
1,ALKOXY,1,3,DIENES WITH CARBONYL COMPOUNDS. CONFIGURATIONS AND
AUTHOR--(05)--YABLONOVSKAYA, S.O., SHEKHTMAN, N.M., ANTONOVA, N.D.,
BOGATKOV, S.V., MAKIN, S.M.
COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 871-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DIENE, CARBONYL COMPOUND, HETEROCYCLIC OXYGEN COMPOUND,
CATALYTIC HYDROGENATION, ISOMER, GAS CHROMATOGRAPHY, NMR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2087

STEP NO--UR/0366/70/005/004/0571/0577

CIRC ACCESSION NO--AP0125674

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--30JUL70

CIRC ACCESSION NO--AP0125674

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE CONDENSATION OF RICH:CHLORON
SUB2 (R IS ME OR ET) WITH OHCCO SUB2 R PRIME1 (R PRIME1 IS ME, ET, OR
BU) GAVE 2,RC,6,RO SUB2 C,DISUBSTITUTED,DELTA PRIME2,DI-HYDROXYANS (II).
HYDROGENATION OF I OVER PTO SUB2 CATALYST GAVE THE TETRAHYDRO ANALOGS
(III). I AND II ISOMERS ARE SEPD. BY GAS CHROMATOG.; NMR SPECTRA ARE
DISCUSSED, THE TRANS ISOMERS, CONTG. AXIAL RO GROUPS, HAVE SHORTER
RETENTION TIMES THAN THE CIS ISOMERS (DIEQUATORIAL CONFORMATION). THE
THEORETICAL CALCNS. OF THE STABILITY OF THESE ISOMERS CONFIRM THE NMR
DATA. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM.
LOMCNOSOVA, MOSCOW, USSR.

USSR

UDC 681.142.37:61

ANTONOVA, N. G., IVANOVSKAYA, G. A., NADENENKO, V. K., SEL'DIMIROVA, Ye. M. and
CHERNYAVSKIY, V. S. Fourth Clinical Hospital

"Processing Medical Information With the "Minsk-22M" Computer and "Blank-P"
Automatic Counting System"

Minsk, Zdravookhraneniye Belorussii, No 6, 1970, pp 62-66

Abstract: Machine storage of medical information and the use of a ready retrieval system were discussed. In addition, a form No 266-M, divided into 60 zones and 490 cells, capable of deciphering 999 pertinent medical problems was added. After detailed presentation of the workings of the "Minsk-22M" computer in conjunction with these blanks, it was concluded that: Machine processing of medical information with the aid of formal documents improves the quality of book-keeping, insures veracity of the data, improves accountability by compiling additional summaries and indicators, and standardizes the discrepancies in diagnoses and therapeutic processes for all medical personnel. In addition, computer processing improves the organization of the initial documentation, perfects the organization of work for accounting personnel and other institutional personnel by freeing them from search and grouping operations, substantially increases the productivity of statisticians, and increases the quality and efficiency of management of a medical establishment.

1/1

ANTONOVA, N. L.

57.063
57.063

IV-4. MASS SPECTROMETRIC STUDIES OF THE EVAPORATION PROCESS OF $Zn_{1-x}Al_x$

Article by N. I. Antimova, A. G. Braginskaya, L. P. Borzhukov, A. B. Popkov, V. S. Kuznetsov, Moscow, Novosibirsk, Ill. Submitted by Professor N. A. Kuznetsov, Poluprevodnikovskiy Institut i Fizicheskii Institut, 12-17 June 1972, p. 213

A mass spectrometric study is made of the processes of thermal expansion of the compound $ZnSiAs_2$, a representative of wide - zone compounds of the II-IV-V class. It is demonstrated that on decomposition of $ZnSiAs_2$ in the gas phase over Zn , $SiAs_2$, and so on, zinc and arsenic vapor occur, the molecular composition of the vapor and the absolute values of the zinc and arsenic pressures in the temperature range from 280° C to 900° C are determined. The function $\ln P = f(1/T)$ is found by the experimental data, and the partial heats of the decomposition process are determined for two sections of the curve. The isobaric-isothermal potentials and entropies in the investigated temperature range were calculated. The activation energy of the process was determined, and the reaction rate constant was found as a function of temperature.

Acc. Nr: AP0045955

Ref. No. 44-38861-10671

PRIMARY SOURCE: *Suktsacologiya*, 1973, Vol. 45, No. 7, pp. 87-89

A

AN ATTEMPT TO OBTAIN THE REGULATION OF THE REVENUE OF THE STATE OF NEW YORK.

1975-1998

22

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210009-5"

AA0040643

Antonova, N. S.

UR 0482

i-76

Soviet Inventions Illustrated, Section I Chemical, Derwent,

241193 GALVANOPLASTIC PRODUCTION of complex-shape articles from cadmium, using permanent aluminium moulds preliminarily subjected to thermal treatment and anodised in sulphuric acid, is improved in that the anodised moulds are copper-plated in a sulphuric acid electrolyte, then the copper deposit is removed and the cadmium-plating is carried out in an ammonium fluoborate electrolyte. In an example, parts of an aluminium mould, which are not wanted to be cadmium-coated, are protected by a gelatine emulsion coating; then the mould is anodised in 4N H_2SO_4 at 1 A/dm.² (18°C), and copper-plated in an electrolyte containing $CuSO_4$ (250g./l.), H_2SO_4 (70 g./l.) and alcohol (5 ml./l.) at 4A/dm.² to a thickness of 0.05-0.08 mm. Subsequently, the copper deposit is removed from the mould, but the copper remaining in the pores and the oxide film facilitates the separation of the cadmium article from the mould. The cadmium-plating is carried out

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18

19750218

AA0040643

AUTHORS: Gofman, Ya. A.; Kutyukov, G. T.; and Antonova, N. S.

in a solution containing (in g/l.): $\text{Cd}(\text{BF}_4)_2$ 70-75, NH_4BF_4 150-170, OP-7 (surface active agent 5-7, ammonium 2-naphthyl-5-sulphonate 0.5-1.0; the pH is 4.5-5.5, and the current density 1-1.5A/dm². After the separation of the cadmium article (adhesion strength does not exceed 10g./cm²), the mould can be utilised again, without repeating the preliminary operations.

30.3.67 as 1145504/22-1. YA.A.GOFMAN et alia.
NOVOSIBIRSK ELECTROTECHNICAL INST. (20.8.69) Bul 13/
1.4.69. Class 48a. Int.Cl. C 23b.

2/2 Novosibirskiy Elektotekhnicheskiy Institut

19750219

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CULCRING MECHANISM OF CERIUM CONTAINING GLASSES -U-
AUTHOR--(03)-BOGDANOVA, G.S., DZHURINSKIY, B.F., ANTONOVA, S.L.
COUNTRY OF INFO--USSR **A**
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 776-80
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CERIUM GLASS, OPTIC PROPERTY, CERIUM COMPOUND, COMPLEX
COMPOUND, SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2031 STEP NO--UR/0363/70/006/004/0776/0780

CIRC ACCESSION NO--AP0125619
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125619

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISM BY WHICH CE IMPARTS COLOR TO GLASSES WAS STUDIED AS WAS THE POSSIBILITY OF USING THIS PIGMENT TO PRODUCE YELLOW ORANGE LIGHT FILTERS HAVING PREDTD. AND REPRODUCIBLE SPECTRAL PROPERTIES. THE EFFECT OF FOUNDTG TIME ON SPECTRAL PROPERTIES OF THESE GLASSES AND ON THE CONC. OF THE QUADRIVALENT CE ION WAS INVESTIGATED. COMPLEX GROUPS CE PRIMEIV O CE PRIMEIII FORM IN CE CONTG. GLASSES. THE SPECTRAL ABSORPTION OF CE CONTG. GLASSES, AS DEPENDENT ON THE CONC. OF THE CE CE COMPLEX FOLLOWS BEER'S LAW. THE SPECTRAL CURVE OF THE MOLAR ABSORPTIVITY FOR THE CE CE COMPLEX, WITH ITS MAX. PROBABLY LOCATED IN THE UV SPECTRAL REGION, FOLLOWS A SLOPING PATH. FACILITY: GOS. NAUCH.-ISSLED. INST. STEKLA, MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--THERMAL AND X RAY PHASE ANALYSIS OF LANTHANUM MOLYBDATE POTASSIUM
AND MOLYBDATE SYSTEMS -U-
AUTHOR-(04)-SAVELYEVA, M.V., SHAKHNO, I.V., PLYUSHCHEV, V.YE., ANTONOVA,
S.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 835-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE DIAGRAM, THERMAL ANALYSIS, X RAY ANALYSIS, METAL COMPLEX
COMPOUND, LANTHANUM COMPOUND, MOLYBDATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1716 STEP NO--UR/0078/10/015/0037/0835/0839
CIRC ACCESSION NO--AP0115545
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115545

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMAL AND X RAY DIFFRACTION STUDY OF K SUB2 MOO SUB4-LN SUB2(MOO SUB4)SUB3 (LN EQUALS GD, DY, HQ, ER, OR Y) SYSTEMS SHOWED THAT THE SYSTEMS FORM ANALOGOUS PHASE DIAGRAMS AND 2 TYPES OF COMPLEXES: THE INCONGRUENTLY MELTING KLN(MOO SUB4)SUB2 (WHICH ARE ISOSTRUCTURAL WITH KY(MOO SUB4)SUB2) AND K SUB8 LN SUB2(MOO SUB4)SUB7 COMPS. THE TEMPS. OF THE PHASE TRANSITIONS IN THE K SUB2 MOO SUB4 LN SUB2(MOO SUB4)SUB3 SYSTEMS ARE TABULATED AND THE PHASE DIAGRAM OF THE K SUB2 MOO SUB4-ER SUB2(MOO SUB4)SUB3 SYSTEM IS PRESENTED. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE EFFECT OF SOUND AND LIGHT STIMULI ON THE ELECTRIC ACTIVITY OF
MUSCLES OF NEWBORNS -U-
AUTHOR--ANTONOVA, T.G. *A*
COUNTRY OF INFO--USSR
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
NR 5, PP 10-13
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PEDIATRICS, ELECTROPHYSIOLOGY, MUSCLE TISSUE,
ELECTROMYOGRAPHY, BIDELECTRIC PHENOMENON

CONTROL MARKING--NO RESTRICTIONS.

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0379

STEP NO--UK/0219/70/069/006/0010/0013

CIRC ACCESSION NO--AP0121067

UNCLASSIFIED

2/2 028
CIRC ACCESSION NO--AP0121067

UNCLASSIFIED

PROCESSING DATE--23 OCT 70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HIGH LEVEL OF ELECTRIC ACTIVITY OF MUSCLES AT REST IN NEWBORNS ENABLES TO DETERMINE CHANGES IN THE MUSCULAR TONE ON THE BASIS OF INTERFERENCE ELECTROMYOGRAM. IN THE ACTION OF SOUND AND LIGHT STIMULI CHANGES OF THE BIOELECTRIC ACTIVITY CONSIST AT LEAST OF TWO COMPONENTS, FIRST OF WHICH IS ALWAYS TONIC, WHEREAS THE SECOND MAY BE BOTH OF TONIC AND PHASIC TYPES. IN A HIGH INITIAL LEVEL OF ELECTROGENESIS IN THE MUSCLE EXTERORECEPTIVE STIMULI REDUCED THE ELECTROGENESIS, IN LOW, INCREASED. ONE COULD ASSUME THE PRESENCE OF REGULATORY MECHANISMS FOR THE PRESERVATION OF A CERTAIN MEDIAN, OPTIMAL LEVEL OF ACTIVITY OF MOTONEURONS. FACILITY: I. M. SECHENOV INSTITUTE OF EVOLUTIONAL PHYSIOLOGY AND BIOCHEMISTRY.

UNCLASSIFIED

Therapy

USSR

UDC 616.981.553-06:616.8-036.17

ANTONOVA, T. M., VORONTSOVA, L. P., KYDRYAVTSEVA, Ye. L., OSADCHAYA, Ye. I., POLOZOV, A. M., and TROFIMENKO, N. K., Volgograd Children's Infections Hospital No 21, and Volgograd Medical Institute

"Clinical Characteristics and Management of Patients Suffering From Botulism With Severe Affections of the Nervous System"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 10, Oct 70, pp 130-133

Abstract: Twenty botulism patients, including 12 with bulbar involvement were studied. Nineteen of the 20 patients recovered. Treatment with botulin antiserum (polyvalent initially, and monovalent after identification of the bacterium type) is effective. However, injections of the serum do not suffice when bulbar disorders develop. In such cases, it is imperative to perform tracheotomy, drain mucus from the trachea and the bronchi, and apply an artificial respiration apparatus. Patients with impaired deglutition and breathing should be admitted to artificial respiration departments as soon as possible; tracheotomy should be performed and other measures such as injection of the antiserum, washing of the gastrointestinal tract, etc., should be taken immediately. Since most botulism cases are caused by consumption of improperly
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USSR

ANTONOVA, T. M., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii,
Vol 10, Oct 70, pp 130-133

home-canned food, it is necessary to expand public education in sanitation and hygiene. This work must be carried out by physicians in all of the specialties, who must enlighten the general public on the importance of proper processing and canning of food.

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- 89 -

2/2 024

UNCLASSIFIED

PROCESSING DATE--15OCT70

CIRC ACCESSION NO--AT0054604

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS DETERMINED THAT MORE THAN 80PERCENT OF THE UPTAKE OF PRIME137 CS AND PRIME90 SR BY HUMAN POPULATIONS OCCURRED THROUGH MILK AND BREAD PRODUCTS. ACCORDINGLY, MONITORING STUDIES WERE CARRIED OUT ON MILK AND GRAIN. VARIATIONS IN THE MEAN DENSITIES OF PRIME137 CS AND PRIME90 SR FALLOUT DURING THE PERIOD 1957 TO 1967 ARE IDENTICAL WITH VARIATIONS IN THE MEAN CONTENT OF THE RADIONUCLIDES IN GRAIN. THE RATIO OF PRIME137 CS TO PRIME90 SR IN MILK WAS HIGHER THROUGHOUT THIS PERIOD THAN THE RATIO OF THEIR CONTENT IN THE FALLOUT. THIS INDICATED THAT THERE WAS AN ENRICHMENT OF PRIME137 CS IN MILK. DATA ON CONTAMINATION OF MILK WITH PRIME90 SR INDICATED THAT THERE WAS A DEFINITE CONTRIBUTION FROM THE SOIL THROUGH ROOTS AS WELL AS THAT FROM LEAVES. FACILITY: GOSUDARSTVENNYI KOMITET PO ISPOL'ZOVANIYU ATOMNOI ENERGII SSSR, MOSCOW.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--THE BINDING OF RADIOACTIVE ISOTOPES BY COMPONENTS OF THE SKIN -U-
AUTHOR--(04)-SHVYDKO, N.S., ILIN, L.A., NOKETS, T.A., ANTONOVA, V.A.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 6, PP 67-72
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, NUCLEAR SCIENCE AND
TECHNOLOGY
TOPIC TAGS--RADIOACTIVE ISOTOPE, SKIN PHYSIOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--300271520 STEP NO--UK/0241/70/015/006/0067/0072
CIRC ACCESSION NO--AP0128915
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128915

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INFORMATION WAS OBTAINED WHICH CHARACTERIZED THE QUANTITATIVE DISTRIBUTION OF RADIOISOTOPES OF MOLYBDENUM, TELLURIUM, STRONTIUM, BARIUM, YTTRIUM, CERIUM AND PRASEODYMIUM WITH NEODYMIUM BETWEEN INDIVIDUAL BIOSTRUCTURES OF THE SKIN AND ITS LAYERS. ON THE BASIS OF THE RESULTS DERIVED THE AUTHORS CONDUCTED A COMPARATIVE ANALYSIS OF BEHAVIOR OF THESE RADIONUCLIDES IN THE SKIN. FACILITY: LENINGRADSKIY NAUCHNO ISSLED. INSTITUT RADIATSIONNOY GIGIYENY MZ RSFSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SR PRIME90 IN THE HAIR AS AN INDEX OF ITS CONTENT IN THE BONE
TISSUE OF MAN -U-
AUTHOR--(02)-ANTONOVA, V.A., SHVYDKO, N.S.
COUNTRY OF INFO--USSR
SOURCE--GIGIYENA I SANITARIYA, 1970, NR 3, PP 43-45
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--STRONTIUM ISOTOPE, RADIOBIOLOGIC INSTRUMENTATION,
RADIOACTIVITY MEASUREMENT, BONE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1982/0652 STEP NO--UR/0240/70/000/003/0043/0045
CIRC ACCESSION NO--AP0052112
UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0052112
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS DATA PROVING
THE EXISTENCE OF A DEFINITE CORRELATION BETWEEN THE CONCENTRATION OF SR
PRIME90 IN THE HAIR AND ITS CONTENT IN THE SKELETON. A REGRESSION
EQUATION WAS OBTAINED THAT MADE IT POSSIBLE TO DETERMINE WITH SUFFICIENT
ACCURACY THE SPECIFIC ACTIVITY OF THE ISOTOPE IN THE BONE TISSUE JUDGING
BY SPECIFIC ACTIVITY OF SR PRIME90 IN THE HAIR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE CORRELATION BETWEEN CONCENTRATION OF CESIUM 137 IN THE HAIR AND
THAT IN THE BODY -U-
AUTHOR--(03)-ANTONOVA, V.A., SHVYOKO, N.S., LISACHENKO, E.P.
COUNTRY OF INFO--USSR A
SOURCE--GIGIYENA I SANITARIYA, 1970, NR. 5, PP 45-48
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CESIUM ISOTOPE, RADIOISOTOPE, MUSCLE TISSUE, CHEMICAL ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/0589 STEP NO--UR/0240/70/000/005/0045/0048
CIRC ACCESSION NO--AP0108804
UNCLASSIFIED

Acc. Nr: AP0034681

Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15,
Nr 2, pp 58-64

THE INTERACTION OF Mo^{99} WITH BIOCOMPONENTS OF THE SKIN

Shvydko, N. S.; Il'in, L. A.; Norets, T. A.; Antonova, M. A.

Summary

The paper presents data characterizing the fixation of Mo^{99} by individual biocomponents of the skin as well as the epidermis, derma and subcutaneous cellular tissue. The authors demonstrate the quantitative distribution of Mo^{99} between fat soluble, water-soluble and residual fractions of the skin and its layers. The mechanisms of fixation of Mo^{99} by different structures of the tissue are discussed.

D. 11

2/2 017
CIRC ACCESSION NO--AP0108804

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS DATA PROVING THE EXISTENCE OF A DEFINITE CORRELATION BETWEEN CONCENTRATION OF CS PRIME137 IN THE HAIR AND THAT IN THE MUSCULAR TISSUE ACCORDING (TO AUTOPSY MATERIAL), IN THE HAIR AND THAT IN THE HUMAN BODY (MEASUREMENT IN VIVO). A REGRESSION EQUATION WAS OBTAINED WHEREBY IT IS POSSIBLE JUDGING BY THE SPECIFIC ACTIVITY OF CS PRIME137 IN THE HAIR TO ASSESS THE SPECIFIC ACTIVITY OF THE ISOTOPE IN THE BODY. CONCENTRATION OF CS PRIME137 IN THE HAIR (IN CESIUM UNITS) IS SHOWN TO BE INDEPENDENT OF THE AGE AND SEX OF THE PERSON.

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210009-5"

UNCLASSIFIED

Coatings

USSR

UDC 621.79:539.23

ANTONOVA, Ye. A., APPEN, A. A., and ANDRUSHCHENKO, N. S., Leningrad

"Investigation of Temperature Conditions of Formation and Service of a Ni-Cr-Si-B Coating"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 31-37

Abstract: The conditions of the formation of coatings using the dross method were studied for an Ni-Cr-Si-B coating. The coating, referred to IM, contained 70% Ni, 20% Cr, 5% Si, and 5% B. The optimum temperature limits were investigated along with the distribution of elements during coating formation on St. 3 and 1Kh18N9T steels. The temperature limit of stability was found to be 700°C, and the gradual resorption of the coating at higher temperatures occurs as the result of iron diffusion into the coating and vice versa.

IM coating possesses all the properties inherent in "Kolmonoy" alloys. Along with heat resistance it has high stability to mechanical and thermal shock and outdoes stellite in resistance to scoring. The addition of 0.2-0.5% sooty carbon increases coating hardness and wear resistance while the addition of up to 30% tungsten and chromium carbides has the same effect. Addition of
1/2

USSR

ANTONOVA, Ye. A., et al., Fizika i Khimiya Obrabotki Materialov, No 5,
Sep-Oct 72, pp 31-37

CrB₂ favorably affects the coating's resistance to scoring in dry friction
assemblies. Four figures, 3 tables, 10 bibliographic references.

2/2

- 9 -

USSR

UDC 621.793.8

ANTONOVA, YE. A., ANDRUSHCHENKO, N. S., and SINAY, L. M.,
Academy of Sciences USSR, Institute of the Chemistry of Silicates
imeni I. V. Grebenshchikov

"Interaction of Ni-Cr-Si-B Coatings With Steel During Facing"

Moscow, Zashchita Metalloy, Vol 7, No 2, Mar-Apr, 1971, pp 137-142.

Abstract: Results are presented from a study of the process of formation of protective coatings on carbon and alloy steels based on finely dispersed powder. The process of formation of the coatings from a mixture of finely dispersed powders applied to the surface of the metal to be protected and the modes of formation of coatings of powdered materials were studied. With the Slurry method of producing Ni-Cr-Si-B coatings of a powder mixture of the initial elements on a steel substrate, the optimal temperature area for facing, providing for a continuous layer, good adhesion, and minimum interaction with the substrate (reaction zone 20-30 μ) lies at the beginning of the interval of melting of the powder mixture, at 980-1050°. With facing temperatures of about 1170° and higher, the contact interaction is sharply expressed (iron in the coating 48% and higher), as a result of formation of large quantities of complex boride eutectics involving the metal substrate.

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- 5 -

Hematology

USSR

UDC 615.385.1

SHULUTKO, L. S., MIKHNOVICH, Ye. P., and ANTONOVA, Ye. V., Blood Preservation Laboratory, Blood Preparation Division, Leningrad Institute of Hematology and Blood Transfusion

"Use of Gelatinol in Erythrocyte Transfusion Fluids Employed in Extracorporeal Circulation"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 9, Sep 70, pp 57-59

Abstract: Changes in transfusion fluids containing a suspension of erythrocytes in gelatinol with a low calcium content were investigated after varying periods of storage and after recirculation in an ISL-2 apparatus. Among the indices studied were pH; osmotic pressure of the erythrocytes; content of labile phosphorus in ATP; content of free hemoglobin, potassium, and inorganic phosphorus in the liquid part of the medium; content of formed elements and morphological changes in the erythrocytes. According to these indices, plasma-substitute erythrocytes can be stored for 5 to 7 days without deterioration. After 48 hours' storage, the erythrocytes showed marked resistance to mechanical and other factors involved in the operation of the ISL-2.

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USSR.

UDC 535.373.2

ANTONOV-ROMANOVSKIY, V. V.

"Diffusion Kinetics of Recombination Luminescence"

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya (News of the Academy of Sciences USSR, Physics Series), Vol 35, No 7, 1971, pp 1290-1300

Abstract: The principal results of studies carried out between 1940 and 1970 on diffusion recombination kinetics of phosphors are reviewed briefly. The basis is given for the fundamental drift diffusion relation that describes the kinetics for short free path lengths, spherical symmetry, and a nonlinear recombination term. This relation can be decomposed into a purely linear drift diffusion equation without the recombination term and a recombination equation that is easily integrated. Problems of mono- and bimolecular kinetics as well as initial and boundary conditions are discussed.

It is shown that experimentally measured recombination cross sections and frequency factors for charged centers can differ from 1/3

USSR

ANTONOV-ROMANOVSKIY, V. V., Investiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 7, 1971, pp 1290-1300

calculated ones by several orders of magnitude. This discrepancy occurs because the probability of finding a free carrier near a center is different from the probability of a carrier at a distance from a center. In the case of a neutral center, the concentration of carriers nearby can be less than the average concentration in the phosphor. On the other hand, the concentration can be considerably higher near an attraction center. An approximate method is proposed for calculating the monomolecular emission extinction curve from the initial distribution of recombining pairs.

The effect of electrical and magnetic fields on recombination kinetics is discussed. If bi- and monomolecular recombination are taking place at the same time, an electrical field tends to separate related components, which decreases monomolecular recombination and increases the bimolecular recombination. Thus, when an electric field is applied to an alkali halide phosphor, luminescence decreases stepwise. Decrease in the mean recombination time results in increase in the concentration of separated charges

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- 121 -

USSR -

ANTONOV-ROMANOVSKIY, V. V., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 7, 1971, pp 1290-1300

until the recombination number becomes comparable with the ionization number. This effect was verified experimentally. The role of the magnetic field is more difficult to study because of side effects.

Orig. art. has 15 refs.

3/3

USSR

UDC 621.439-596.6:536.2

ANTONOVICH, A. V., BASHKATOV, Yu. N., TRIFSIK, M. I., and RASHIN, B. V.

"Dynamics of Thermal Conditions of the Turbine at Various Stop Methods of the Gas Turbine Unit"

V sb. "Dinamika Teplov. Protsessov v Energetike i Tekhnol." [In the Collection "Dynamics of Thermal Processes in Power Engineering and Technology], Kiev.

"Nauk. Dumka", 1971, pp 61-67 (from Referativnyi Zhurnal, No 6, Jun 72. 49).

Turbostroyeniye. Abstract No 6.49.133)

Translation: The stop method with instantaneous turning off of the combustion chamber, usually applied on gas turbine units, results in a sharp change of the heat conditions of turbine parts reached by working gases, negatively affecting their reliability and life; the internal potentialities of the gas turbine unit practically make it possible to control the turbine heat conditions by a programmed change of the fuel consumption not only when starting but also when stopping; thanks to this fact, the thermal nonuniformity of turbine parts decreases. A simple and effective system of programmed stop, developed and put into practice on a gas turbine unit, made possible to increase the operational reliability of the unit. Four illustr., two biblio. refs.

1/1

USSR

UDC 614.7:615.285.7:632.95]-099

TRAKHTENBERG, I. M., Professor, KAGAN, Yu. S., Professor, BELONOVICHKO, G. A., Doctor of Medical Sciences, ANTONOVICH, Ya. A., Candidate of Medical Sciences, and POL'CHENKO, V. I., Candidate of Medical Sciences, All Union Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers, and Plastics, Ministry of Health USSR, and Kiev Medical Institute

"Pesticides and Problems of Hygiene"

Moscow, Gigiyena i Sanitariya, No 7, Jul 70, pp 14-17

Abstract: The following topics were discussed: the increasing use of pesticides all over the world, the mounting number of reported poisonings (from 1,700 cases in the period 1945-1949 to over 15,000 in the period 1955-1959), the varied effects of soil and water pollution, and the ability of some pesticides to interact with food proteins, fats, and vitamins and to alter the specific and nonspecific reactivity of the body to many pathological agents and physiological stimuli. These conditions require a massive research effort as a preliminary step in the intelligent control of the use of these toxic compounds. Of major importance is the development of adequate animal models to study the remote effects of pesticides, to determine the possibility of extrapolating the data to man, and to predict the potential dangers to health from low concentrations of the toxins.

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USSR

UDC 539.4

TAVER, Ye. I., RYSKIN, A. N., KOPYLOV, A. K., SIPOROV, N. G., KRICHENSKIY, Ye. Yu., SUKHOPIN, A. M., ANTROPOV, N. P., ANTONOVSRAYA, E. I., Leningrad

"Strength of Welded Joints in High-Strength Stainless Steels at Cryogenic Temperatures"

Kiev, Problemy Prochnosti, No 6, 1972, pp 95-96.

Abstract: The influence of the geometry of welded seam made by austenitic wire on the strength of welded joints of martensitic stainless steels at cryogenic temperatures is studied. The influence of technological defects (such as under- and overheating) on strength of welded joints of two types of steels at low temperatures is studied. It is established that designers must consider both reduced strength of seam metal under normal conditions and impermissibility of any stress concentrators in the seam zone.

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USSR

UDC 616.981.25-092.9

ANATOLIY, S. A., ANTONOVSKAYA, I. I., TASK, S. Ya., and PADERINA, Ye. M.,
Institute of Experimental Medicine, Academy of Medical Sciences USSR,
First Leningrad Medical Institute imeni Akad. I. P. Pavlov, and Leningrad
Sanitary-Hygiene Medical Institute

"Comparison of Some Experimental Models of Staphylococcal Infection"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971,
pp 60-63

Abstract: A comparison of four models of staphylococcal infection -- intra-orbital, intravenous, intraperitoneal, and intranasal -- showed that mice inoculated in the first two modes died within 9 to 12 hours, while those inoculated in the last two modes died 3 to 5 days later. The rapid death and disappearance of Staphylococci in the animals inoculated intraperitoneally or intranasally indicate a toxic process, whereas the longer survival time of the animals inoculated intraorbitally or intravenously point to a true infectious process. The latter two models are, therefore, to be preferred when studying the virulence of Staphylococci, immunity to these microorganisms, and pathogenesis of generalized infection.

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USSR

UDC: 517.9:532

ANTONTSEV, S. N., MONAKHOV, V. N.

"On Some Nonstationary Problems With Unknown Boundaries"

V sb. Nekotor. probl. mat. i mekh. (Some Problems of Mathematics and Mechanics--collection of works), Leningrad, "Nauka", 1970, pp 75-87 (from RZh-Matematika, No 5, May 71, Abstract No 5B492)

Translation: Proof is given of the existence of generalized solutions of a class of boundary value problems with a free boundary for a quasilinear system of differential equations consisting of a parabolic equation and an elliptical system of first-order equations. The parabolic equation describes either the temperature field of a filtering nonhomogeneous liquid or the distribution of saturation of one of the phases of a nonhomogeneous liquid in nonhomogeneous ground. In the intermediate stages of the investigation a study is made of the properties of quasiconformal mappings which depend on a real parameter, proof is given of the unique solvability of a mixed boundary value problem with four singular points for quasilinear elliptical systems of equations, and the solvability of the first boundary value problem is established for a quasilinear parabolic equation in noncylindrical regions with a non-smooth boundary. Authors' resumé.

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- 4 -

USSR

UDC 669.71.053.4.065

PISMAREVA, V. A., ~~ANTONTSEVA~~, A. Z., FATEYEVA, Z. T.

"Glass Enamel Facilitates Autoclave Sulfuric Acid Leaching of High-Silica Alumina-containing Materials"

Nauch. tr. Kazakhsk. Politekhn. In-t. [Scientific Writings of Kazakh Polytechnical Institute], Alma-Ata, 1971, pp 566-569, (Translated from Referativnyy Zhurnal, Metallurgiya, No 5, 1972, Abstract No 5 G213 by G. Svodtseva).

Translation: A study was made of the process of sulfuric acid leaching of high-silica alumina-containing materials in autoclaves covered with enamel. These autoclaves showed advantages over lead-covered autoclaves: they are more compact and lighter, and withstand high temperatures (up to 500°); the solutions and sediments produced were pure, without Fe admixtures from the autoclaves; they are safer to use. A technology is described for coating of laboratory autoclaves with glass enamel and its compositions. Two coats of enamel are used: a base coat and the cover enamel. The enamels are baked at 900°. 2 Tables; 5 Biblio. Refs.

1/1

ANTONYAN, A. A.

AGE CHARACTERISTICS OF ABSORPTION OF MINERAL SUBSTANCES FROM A NUTRIENT MEDIUM BY CHLORELLA CELLS

ENG. 582.266.55-113-253

[Article by Ye. K. Lebedeva, A. A. Antonyan, T. D. Galikina and G. I. Melnikova, Moscow, Kozm. i. biokh. i. med. i. fiziol., Russian, Vol. 6, No. 1, pp. 19-23, 1972, submitted for publication 13 April 1971]

Abstract: Age peculiarities of mineral metabolism of Chlorella Spk cells were investigated during intensive cultivation. The results confirm the fact that the age structure of the Chlorella population and nitrogen and phosphorus removal from the medium are correlated. The correlation also finds support in data concerning the fractionation of nitrogen and phosphorus compounds in cells. This is mainly related to the protein form of nitrogen and the acid-soluble fraction of organic phosphate actively involved in the intracellular metabolism. These findings concerning cell requirements varying with respect to the age structure of the Chlorella population should be taken into account when cultivating an intensive Chlorella culture and determining the quantity of minerals to be added.

The method of prolonged continuous cultivation of Chlorella is based on a systematic replenishment of the loss of mineral elements absorbed by the cells in a nutrient medium and transported mechanically with the growing biomass. Such a study is based on a criterion value experimentally established for a heterogeneous population which varies about its mean value. These data are used in preparing a single correcting solution which under stable cultivation conditions ensures the limits of variations in the concentration of mineral nutrient elements in the medium necessary for normal growth. However, in the course of an experiment one can observe deviations in the cell consumption of mineral elements from the nutrient medium from the established mean values. One of the direct causes of these deviations may be a partial asynchronization (a change in the relationship of cells of different physiological age in the population), which is an inevitable result of impairment in cultivation conditions if they exert even an insignificant selective effect on any age stage in the cells.

USSR

UDC 632.952:634.75

BYCHENKO, N. I., and ANTONYAN, L. K., Sochi Toxicological Laboratory,
All-Union Institute of Plant Protection

"The Effectiveness of New Fungicides Against Grey Mold of Strawberries"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 6, 1972, pp 33-35

Abstract: In the experiments, in Krasnodarskiy Kray, the following fungicides were used: benomyl, a 50% wetting powder from Dupont, U.S.; Basfungin, and 70% wetting powder from BASF, FRG; El-273, a 4% wetting powder from Elanco, England; captan, a domestic 50% wetting powder; sclex, a 30% wetting powder from Sumitomo, Japan; and Eparen, a 50% wetting powder from Bayer, FRG. Preliminary tests were conducted in a greenhouse on early Sochinskaya strawberries, with the following concentrations: sclex -- 0.2; Eparen -- .5; benomyl -- .1, and captan (the standard) -- .5. Control plots were treated with water. The strawberries were sprayed first at the beginning of blossoming (18 Feb), then at the end of blossoming (9 Mar), and finally on 1 June. Infection with grey mold was measured at the two bearing times, on a 6 point scale. Later a field experiment was conducted, which correlated with the greenhouse results. It was found that in local conditions benomyl increased the average yield 79%, captan 61%, sclex 55% and Eparen 49% over the control. These fungicides also retarded the development of brown blight. The other fungicides were not effective.

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USSR

UDC 621.315.592:546.28

ANTONYAN, V.G., GRINBLAT, S.L., KAMARALI, V.V., MURAVITSKIY, S.A.

"Some Causes Of Radial Nonuniformity With Respect To Resistivity Of Noncrucible Silicon Monocrystals"

V sb. Tekhnol. materialov elektron. tekhn. (Technology Of Materials For Electronics Technics--Collection Of Works), Krasnoyarsk, 1970, pp 144-147 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11B54)

Translation: The uniformity is investigated of the distribution of electrical conductivity in a cross section of crystals grown by the method of noncrucible zone melting. The effects of regimes for the growth of monocrystals on the uniformity are shown, as well as the possibility of reducing the magnitude of the spread of the resistivity from seven to five percent because of their optimum matching. 2 ill. 3 ref. Summary.

1/1

- 78 -

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--OCCUPATIONAL DISEASES OF THE SKIN IN THE PRODUCTION OF ALUMINA -U-
AUTHOR--(03)-ANTONYEV, A.A., PODKIN, YU.S., LOK, S.M.
COUNTRY OF INFO--USSR A
SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 3, PP 92-96
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ALLERGIC DISEASE, INDUSTRIAL HYGIENE, DERMATOLOGY, ALUMINA

CCNTRGL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PRUXY REEL/FAME--2000/1449 STEP NO--UR/C497/70/048/003/0092/0096
CIRC ACCESSION NO--AP0125082
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125082

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR DESCRIBES THE CURRENT STATE OF THE PROBLEM ON INDUSTRIAL HYGIENE AND OCCUPATIONAL PATHOLOGY IN THE PRODUCTION OF ALUMINA FROM BAUXITE ACCORDING TO SOVIET AND FOREIGN LITERATURE SOURCES. UNDER STUDY WERE THE SANITARY AND HYGIENIC CONDITIONS OF WORK IN ALUMINA SHOPS OF THE PAVLODARSK PLANT; THE AUTHORS BRIEFLY DEPICT THE SCHEME OF THE TECHNOLOGICAL PROCESS. DURING STUDIES OF THE RAW MATERIAL AND INTERMEDIATE PRODUCTS OF THE ALUMINA PRODUCTION THE AUTHORS REVEALED THE PRESENCE OF CHROMIUM. DURING THE MEDICAL EXAMINATION OF 301 WORKERS IN 11 PERSONS (3.6PERCENT) THERE WERE DIAGNOSED OCCUPATIONAL DERMATITIS AND ECZEMA. SKIN TESTS IN 6 PERSONS REVEALED AN AUGMENTED SENSITIVITY TO CHROMIUM AND COBALT. A LATENT SENSITIZATION TO THE REFERRED TO ELEMENTS WAS DISCLOSED IN 14 CLINICALLY HEALTHY WORKERS. THUS, THE AUTHORS FOR THE FIRST TIME PROVED THAT THE DEVELOPMENT OF ALLERGIC OCCUPATIONAL DERMATOSIS IN THE PRODUCTION OF ALUMINA FROM BAUXITE IS CONDUCIVE TO THE SENSITIZING EFFECT OF COBALT. THE POSITIVE REACTION TO COBALT COULD, APPARENTLY, BE EXPLAINED BY THE CROSS OR GROUP SENSITIVITY TO THE CHROMIUM. THE AUTHORS PROPOSED A COMPLEX OF MEASURES FOR THE PREVENTION OF OCCUPATIONAL DISEASES OF THE SKIN. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANIY AMN SSSR, MOSKVA. FACILITY: KOZHNO-VENEROLOGICHESKIY INSTITUTE, INSTITUT GIGIVENV TRUDA I PROFRATOLOGII, SVERDLOVSK.

UNCLASSIFIED

USSR

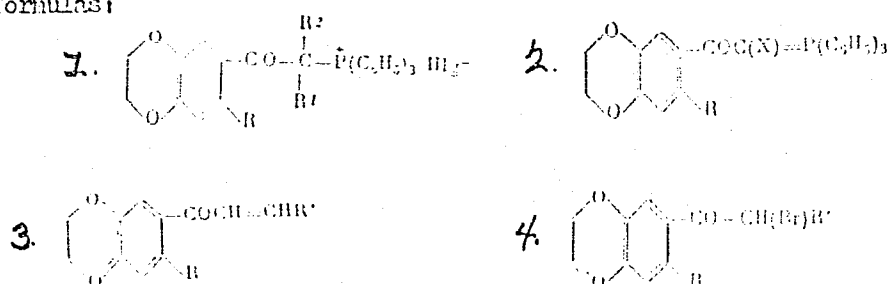
UDC 547.558.1

ANTONYUK, A. S., SHEVCHUK, M. I., and DOMBROVSKIY, A. V., Chernovits State University

"Phosphonic Salts and Phosphoranes Containing the 6-Carbotenzedioxane. Alkylidene Radical."

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 8, 1972, pp 1706-1714

Abstract: Thirty-six compounds were prepared having one of the following general formulas:



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2/2 025
CIRC ACCESSION NO--AP0105304
ABSTRACT EXTRACT

UNCLASSIFIED

PROCESSING DATE--16OCT70

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002200210009-5"

FRACTION FROM CD IRRADIATED WITH 660-MEV RHO WAS STUDIED WITH GELUP DETECTORS. BESIDES PRIME99 PD, THE FRACTION ALSO CONTAINED OTHER PD NUCLIDES, AND PRIME98 RH, PRIME99 RH, AND PRIME104 AG. THE PRIME99 PD GAMMA LINES WERE IDENTIFIED FROM THEIR HALF LIVES AND FROM THE CONSISTENCY IN RELATIVE INTENSITIES DURING VARIOUS STAGES AFTER IRRADON. THE PROBABLY DECAY SCHEME OF PRIME99 PD IS PRESENTED. THE BETA TRANSITIONS TO PRIME99 RH LEVELS SHOWED A HIGH DEGREE OF PROBABILITY: LOG FT EQUALS 4.9 FOR THE 1ST EXCITED LEVEL. SOME SIMILARITIES IN THE DECAY SCHEMES OF PRIME99 PD AND PRIME101 PD ARE POINTED OUT. FACILITY: NAUCH.-ISSLED. FIZ. INST., LENINGRAD. GOS. UNIV., LENINGRAD, USSR.

1/2 025
TITLE--GAMMA RADIATION OF PALLADIUM-99 -U-

UNCLASSIFIED

PROCESSING DATE--16OCT70

AUTHOR--(05)-ANTONYEVA, N.M., GRIGORYEV, YE.P., KATYKHIN, G.S., NIKITIN, M.K., PROTASOVA, L.F.
COUNTRY OF INFO--USSR

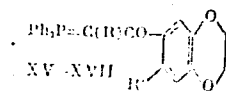
SOURCE--IZV. AKAD. NAUK SSR, SER. FIZ. 1970, 34(1), 54-8

DATE PUBLISHED-----70

USSR

ANTONYUK, A. S., et al., Zhurnal Obshchey Khimii, Vol 42(104), No 8, 1972, pp 1706-1714

Synthesis involved the reaction of Br_2 with 6-acetylbenzodioxane-1,4,6-acetyl-7-ethylbenzodioxane-1,4 and 6-propionylbenzodioxane-1,4 to form the α -bromoketone. This was reacted with triphenylphosphine to form the phosphonium salt. Reaction with $\text{C}_2\text{H}_5\text{ONa}$ and dehydrobromination resulted in the formation of



This was the starting material from which other derivatives were prepared by reaction with $\text{C}_6\text{H}_5\text{ICl}_2$, BrI , RCCl and others. Elemental analysis, physical data and a few UV spectra are given.

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- 24 -

USSR

UDC 547.836:661.718.1'

SHEVCHUK, M. I., ANTONYUK, A. S., and DOMBROVSKIY, A. V., Chernovtsy State University

"Phosphonium Salts and Phosphoranes With Condensed Aromatic Rings in the Alkylidene Part of the Molecule"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1696-1701

Abstract: The article describes the synthesis of new phosphonium bromides and phosphoranes containing such aryl radicals as 2- and 3-carbophenanthryl, 5-carboacenaphthenyl and 4,7-dicarboacenaphthenylene in the alkylidene part of the molecule. Bromination of 2- and 3-acetylphenanthrene, 9-acetylanthracene, 5-acetyl- and 4,7-diacetylnaphthalene in an ether-dioxane solution gives respectively 2- and 3-bromoacetylphenanthrenes, 9-bromoacetylanthracene, 5-bromoacetylnaphthalene and 4,7-bisbromoacetylnaphthalene. The resultant bromoketones react with triphenylphosphine to give phosphonium bromide salts. The latter are readily dehydrobrominated to give new arylmethylenetriphenylphosphoranes. The Wittig reaction of the latter with p-nitrobenzaldehyde and 9-anthraldehyde gives α, β -unsaturated ketones containing condensed aromatic rings.

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USSR

UDC 547.341

SHEVCHUK, M. I., ANTONYUK, A. S., DOMBROVSKIY, A. V., Chernovtsy
State University, Chernovtsy, Ministry of Higher Education
Ukrainian SSR

"Synthesis of Phosponium Salts and of Phosphoranes From 2-Acetyldi-
benzofurane"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 8, Aug 70,
pp 1717-1725

Abstract: Reacting bromomethyl-2-dibenzofuraneketone with triphenyl-
phosphine yields 2-carbodibenzofuranemethyltriphenylphosphonium
bromide, which is dehydrobrominated to 2-carbodibenzofuranemethylene-
triphenylphosphorane (I). In turn, (I) was reacted with iodobenzyl-
chloride, bromine, bromiodine, and acyl chlorides of the chloro-
acetic, phenylacetic, p-nitrobenzoic, cinnamic, and pyromucic acids,
yielding nine α -substituted phosphoranes with the dibenzofurane
radical. The chloro-, bromo-, and iododerivatives of (I) form
phosphonium iodides with ethyl iodide -- 2-carbodibenzofuranemethyl-
halidomethyltriphenylphosphonium iodides, which are capable of under-
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USSR

SHEVCHUK, M. I., et al, Zhurnal Obshchey Khimii, Vol 40, No 8,
Aug 70, pp 1717-1725

going an exchange reaction with lead acetate, replacing the iodine anion by the acetate anion. IR and UV spectra of representative products are reported; physical properties are tabulated.

1/2

Power, Engine, Turbine, Pump

USSR

UDC: 621.433.3-44

OGARKOV, A. G., BERSHACHEVSKIY, V. V., ANTONYUK, I. A., OL'SHEVSKIY, G. P.

"A Fuel Feed Control System"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 8, Mar 73, Author's Certificate No 367279, Division F, filed 5 May 69, published 23 Jan 73, p 98

Translation: This Author's Certificate introduces a fuel feed control system for a free-piston engine operating on a gas-liquid cycle. The system contains a pump for metering liquid fuel and feeding it to the atomizer, a control mechanism, and a gas-feed valve with a regulator for metering the gas entering from the main line. As a distinguishing feature of the patent, the liquid fuel consumption is reduced, and the pickup of the engine is improved by making the regulator in the form of a cylindrical slide valve and sleeve having openings for delivery of gas to the feed valve. The sleeve is movable with respect to the housing and is fitted with tension members with locking devices, one of which is kinematically coupled to the fuel pump rack, while the other is kinematically coupled to the control mechanism. The patent also covers a modi-

1/2

USSR

OGARKOV, A. G. et al., USSR Author's Certificate No 367279

fication of this control system distinguished by the fact that the regulator is equipped with a startup gas pressure governor and a power corrector made in the form of a cylinder connected to the gas main with a piston whose rod is kinematically coupled to the regulator slide valve.

2/2

- 120 -

USSR

UDC 8.74

ANTONYUK, M. I.

"The Structure of Controls and Methods of Implementing them in Adaptive Trainers for the Formation of Work Skill on Keyboard Devices"

V sb. Mat. i inform. probl. prognozir. i upr. naukoy (Mathematical and Information Problems of Forecasting and Control of Sciences -- collection of works), Kiev, 1971, pp 206-219 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V569)

Translation: A specialized trainer has been developed which can be used to train telegraph operators, key punch operators and computer operators who use telegraph equipment in their jobs.

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Acc. Nr:

ANTONYUK

O.I.

Ref. Code:

AA0108685

Abstracting Service: 3 70

UR 0482

Soviet Inventions-Illustrated, Section I Chemical, Derwent,

[244360 SURFACE HARDENING is preceded by heating to below re-crystallisation point to improve fatigue strength. This is done by a transformer (1), roller electrode (2) and hardening roller (3) fitted on a lathe support. The electrode rollers ride ahead of the hardener at a speed governed by the heating time of the particular surface. This resistance heating principle gives an easily adjusted schedule by current control systems.

22.1.68 as 1213133/22-1. BEGAGOEN.I.A., P.A.RUDENKO, A.I. BOIKO et al. KRIVOI ROG MINING INST. (23.10.69) Bul 18/28.5.69. Class 18c. Int.Cl. C 21 d.

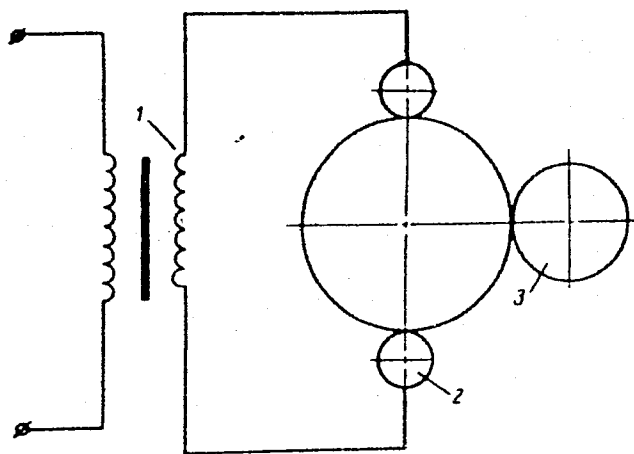
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18

REEL/FAME

19900399

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AUTHORS: Begagoyen, I. A.; Rudenko, P. A.; Boyko, A. I.;
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Krivorozhskiy Gornorudnyy Institut

3/4
19900401

USSR

UDC: 532.526

ANTONYUK, R. A.

"Laminar Boundary Layer on a Moving Surface"

Sb. nauch. tr. Kiyev. in-t inzh. grazhd. aviatsii (Collected Scientific Works. Kiev Institute of Civil Aviation Engineers), 1971, vyp. 7, pp 89-95 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7B673)

Translation: The paper presents an approximate calculation of the laminar boundary layer on a moving surface. The analysis is based on using the integral relation of pulses and approximation of the velocity profile by L. G. Loytsyanskiy's function. It is shown that zero tangential stress at the wall is not a sufficient criterion of detachment. The onset of boundary layer detachment requires that the longitudinal velocity component and its derivative with respect to the normal to the washed surface be simultaneously equal to zero. Bibliography of 11 titles. Author's abstract.

1/1

USSR

UDC 532.522

ANTONYUK, R. A., Kiev Institute of Civil Aviation Engineers

"The Semibounded Laminar Jet of an Incompressible Liquid on a Moving Plate"

Kiev, *Gidromekhanika*, No 19, 1971, pp 76--79

Abstract : A two-dimensional semibounded laminar jet of an incompressible liquid discharging from a slit and spreading in the co-current-stream on a smooth plate moving with the velocity of the co-current-stream in the same direction is analyzed. A solution of the system of differential equations characterizing the flow character is presented for the case when the jet velocity on the cut-off of the slit differs little from the velocity of the co-current stream. This solution is a first attempt to investigate the mechanism of the formation and the propagation of semibounded jets on moving surfaces. Four illustr., 17 formulas, three biblio. refs.

1/1

- 26 -